STN search of sequences for:

$(ala)_5\ cys\ (gly)_1$

$(ala)_5\ cys\ (tyr)_1$

```
=> e aaaaacg/sqep 5
E1            3     AAAAACCAAA/SQEP
E2            1     AAAAACCQVGCIRKDIARLC/SQEP
E3            0 --> AAAAACG/SQEP
E4            1     AAAAACYE/SQEP
E5            1     AAAAADAAAAHAAAAAAA/SQEP

=> e aaaaacy/sqep 5
E1            3     AAAAACCAAA/SQEP
E2            1     AAAAACCQVGCIRKDIARLC/SQEP
E3            0 --> AAAAACY/SQEP
E4            1     AAAAACYE/SQEP
E5            1     AAAAADAAAAHAAAAAAA/SQEP

=> s aaaaacg/sqsp
L1          123 AAAAACG/SQSP

=> s aaaaacy/sqsp
L2            8 AAAAACY/SQSP

=> fil medl, biosis,embase,caplus;s frigerio l?/au;s hadlington j?/au


FILE 'MEDLINE' ENTERED AT 17:02:59 ON 30 MAY 2007

FILE 'BIOSIS' ENTERED AT 17:02:59 ON 30 MAY 2007
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FILE 'EMBASE' ENTERED AT 17:02:59 ON 30 MAY 2007
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FILE 'CAPLUS' ENTERED AT 17:02:59 ON 30 MAY 2007
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L3          103 FILE MEDLINE
L4           83 FILE BIOSIS
L5           84 FILE EMBASE
L6           46 FILE CAPLUS

TOTAL FOR ALL FILES
L7          316 FRIGERIO L?/AU


L8            5 FILE MEDLINE
L9            5 FILE BIOSIS
L10           2 FILE EMBASE
L11           8 FILE CAPLUS

TOTAL FOR ALL FILES
L12          20 HADLINGTON J?/AU

=> s (l1 or l2) and (l7 or l12)
L13           0 FILE MEDLINE
L14           0 FILE BIOSIS
L15           0 FILE EMBASE
L16           1 FILE CAPLUS
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TOTAL FOR ALL FILES
L17 1 (L1 OR L2) AND (L7 OR L12)

=> d ibib abs hitseq

L17 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:453253 CAPLUS Full-text
DOCUMENT NUMBER: 141:22183
TITLE: Improved secretion of antibodies from plants
INVENTOR(S): Frigerio, Lorenzo; Hadlington, Jane
PATENT ASSIGNEE(S): University of Warwick, UK
SOURCE: PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004046190	A2	20040603	WO 2003-GB4983	20031117
WO 2004046190	A3	20040715		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2506505	A1	20040603	CA 2003-2506505	20031117
AU 2003302026	A1	20040615	AU 2003-302026	20031117
EP 1578800	A2	20050928	EP 2003-811425	20031117
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2006276637	A1	20061207	US 2005-535433	20050518
PRIORITY APPLN. INFO.:			GB 2002-26878 A	20021118
			WO 2003-GB4983 W	20031117

OTHER SOURCE(S): MARPAT 141:22183

AB The authors disclose antibodies containing an Ig heavy chain comprising a α3 domain or a mu domain. The preparation of these antibodies comprises: (a) providing a nucleotide sequence encoding the Ig heavy chain; (b) modifying the nucleotide sequence in the region encoding the C-terminal 18 amino acids of the completed heavy chain to remove, or reduce the effectiveness of, one or more vacuolar targeting sequences; (c) inserting the modified nucleotide sequence into a host cell; and (d) causing the host cell to express the modified nucleotide sequence to form the modified antibody heavy chain and secrete the modified antibody heavy chain from the host cell. This improves the secretion of the antibody from, for example, plant cells. Methods of adding J-chain binding activity to antibodies are also provided. In one example, the improved expression of an IgG containing a Cα2-Cα3 domain is demonstrated.

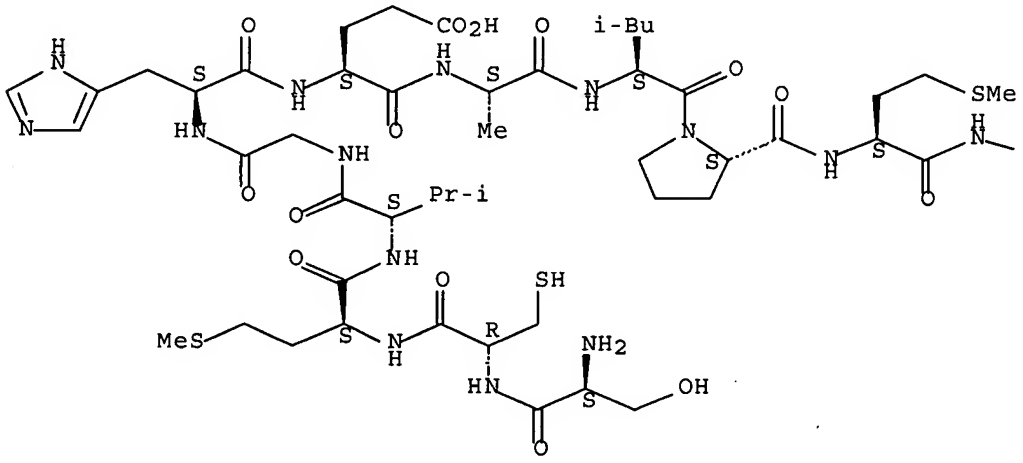
IT 698349-61-0D, antibody heavy chains-containing
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(engineering of antibodies for improved secretion from transgenic plant cells)

RN 698349-61-0 CAPLUS

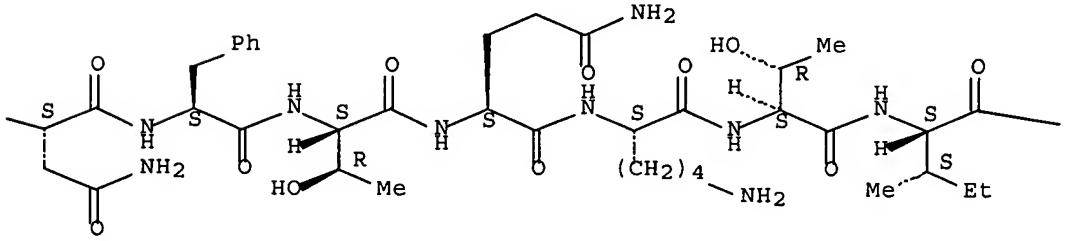
CN L-Tyrosine, L-seryl-L-cysteinyl-L-methionyl-L-valylglycyl-L-histidyl-L-α-glutamyl-L-alanyl-L-leucyl-L-prolyl-L-methionyl-L-asparaginyl-L-phenylalanyl-L-threonyl-L-glutaminyl-L-lysyl-L-threonyl-L-isoleucyl-L-α-aspartyl-L-arginyl-L-leucyl-L-serylglycyl-L-lysyl-L-prolyl-L-alanyl-L-alanyl-L-alanyl-L-alanyl-L-alanyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

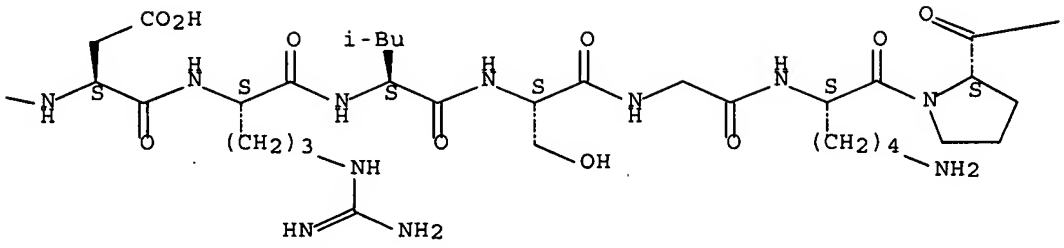
PAGE 1-A



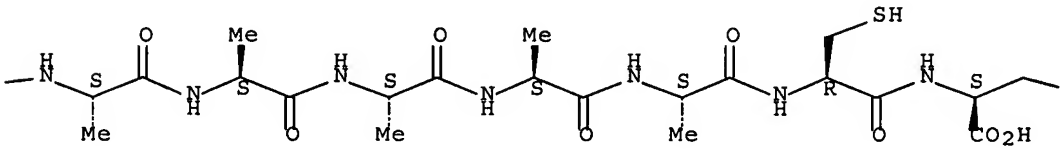
PAGE 1-B



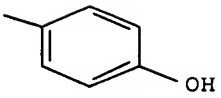
PAGE 1-C



PAGE 1-D



PAGE 1-E

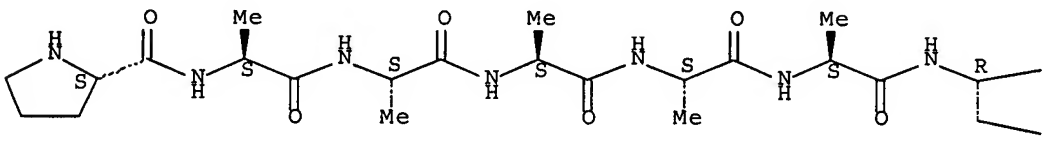


IT 698349-36-9
RL: PRP (Properties)
(unclaimed sequence; improved secretion of antibodies from plants)
RN 698349-36-9 CAPLUS
CN L-Tyrosine, L-prolyl-L-alanyl-L-alanyl-L-alanyl-L-alanyl-L-alanyl-L-cysteinyl- (9CI) (CA INDEX NAME)

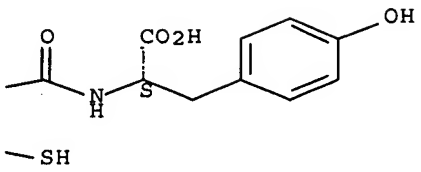
SEQ 1 PAAAAACY

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



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=> s l7 and l12
L18           2 FILE MEDLINE
L19           2 FILE BIOSIS
L20           2 FILE EMBASE
L21           3 FILE CAPLUS

TOTAL FOR ALL FILES
L22           9 L7 AND L12

=> s l22 not l16
L23           2 FILE MEDLINE
L24           2 FILE BIOSIS
L25           2 FILE EMBASE
L26           2 FILE CAPLUS

TOTAL FOR ALL FILES
L27           8 L22 NOT L16

=> dup rem l27
PROCESSING COMPLETED FOR L27
L28            2 DUP REM L27 (6 DUPLICATES REMOVED)

=> d 1-2 ibib abs

L28  ANSWER 1 OF 2     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:    2003281259     MEDLINE  Full-text
DOCUMENT NUMBER:     PubMed ID: 12808054
TITLE:               The C-terminal extension of a hybrid immunoglobulin A/G
                     heavy chain is responsible for its Golgi-mediated sorting
                     to the vacuole.
AUTHOR:              Hadlington Jane L; Santoro Aniello; Nuttall
                     James; Denecke Jurgen; Ma Julian K-C; Vitale Alessandro;
                     Frigerio Lorenzo
CORPORATE SOURCE:    Department of Biological Sciences, University of Warwick,
                     Coventry CV4 7AL, United Kingdom.
SOURCE:              Molecular biology of the cell, (2003 Jun) Vol. 14, No. 6,
                     pp. 2592-602.  Electronic Publication: 2003-03-07.
                     Journal code: 9201390. ISSN: 1059-1524.
PUB. COUNTRY:        United States
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
                     (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         200402
ENTRY DATE:          Entered STN: 17 Jun 2003
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Last Updated on STN: 21 Feb 2004
Entered Medline: 20 Feb 2004

AB We have assessed the ability of the plant secretory pathway to handle the expression of complex heterologous proteins by investigating the fate of a hybrid immunoglobulin A/G in tobacco cells. Although plant cells can express large amounts of the antibody, a relevant proportion is normally lost to vacuolar sorting and degradation. Here we show that the synthesis of high amounts of IgA/G does not impose stress on the plant secretory pathway. Plant cells can assemble antibody chains with high efficiency and vacuolar transport occurs only after the assembled immunoglobulins have traveled through the Golgi complex. We prove that vacuolar delivery of IgA/G depends on the presence of a cryptic sorting signal in the tailpiece of the IgA/G heavy chain. We also show that unassembled light chains are efficiently secreted as monomers by the plant secretory pathway.

L28 ANSWER 2 OF 2 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2002711172 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 12473100
TITLE: ER-resident chaperone interactions with recombinant antibodies in transgenic plants.
AUTHOR: Nuttall James; Vine Nicholas; Hadlington Jane L; Drake Pascal; Frigerio Lorenzo; Ma Julian K-C
CORPORATE SOURCE: Department of Biological Sciences, University of Warwick, Coventry, UK.
SOURCE: European journal of biochemistry / FEBS, (2002 Dec) Vol. 269, No. 24, pp. 6042-51.
Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 17 Dec 2002
Last Updated on STN: 7 Mar 2003
Entered Medline: 6 Mar 2003

AB In this study, we demonstrate that the folding and assembly of IgG in transgenic tobacco plants is orchestrated by BiP (binding protein), an endoplasmic reticulum resident chaperone. Expression of BiP and calreticulin was examined in transgenic tobacco plants that express immunoglobulin chains, either singly or in combination to form IgG antibody. BiP mRNA expression was lowest in wild-type nontransformed plants and those that expressed immunoglobulin light chain alone. Higher mRNA levels were detected in plants expressing fully assembled immunoglobulin (light and heavy chains), and the most abundant levels of RNA transcript were found in those plants that expressed immunoglobulin heavy chain alone. Estimation of total BiP demonstrated a similar pattern, with the highest levels detected in plants expressing immunoglobulin heavy chain alone. Immunoprecipitation studies demonstrated that BiP was associated with immunoglobulin chains extracted from protoplast lysates, but not from secreted fluids. Again, most BiP was coprecipitated from plants expressing heavy chain only and those that produced full length IgG. The binding of BiP to Ig heavy chains was ATP-sensitive. Co-expression of heavy and light chain resulted in IgG assembly and displacement of BiP from the heavy chain as the amount of light chain increased. Although calreticulin mRNA and total protein levels varied in a similar manner to those of BiP in the transgenic plants, there was no evidence for association between calreticulin and Ig chains, by coimmunoprecipitation. The results indicate that BiP, but not calreticulin, takes part in immunoglobulin folding and assembly in transgenic plants.

```
=> dis his nofile

     (FILE 'HOME' ENTERED AT 16:57:08 ON 30 MAY 2007)

     FILE 'REGISTRY' ENTERED AT 16:57:43 ON 30 MAY 2007
               E AAAAACG/SQEP 5
               E AAAAACY/SQEP 5
L1           123 SEA ABB=ON  PLU=ON  AAAAACG/SQSP
L2             8 SEA ABB=ON  PLU=ON  AAAAACY/SQSP

     FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 17:02:59 ON 30 MAY 2007
L3           103 SEA ABB=ON  PLU=ON  FRIGERIO L?/AU
L4            83 SEA ABB=ON  PLU=ON  FRIGERIO L?/AU
L5            84 SEA ABB=ON  PLU=ON  FRIGERIO L?/AU
L6            46 SEA ABB=ON  PLU=ON  FRIGERIO L?/AU
     TOTAL FOR ALL FILES
L7           316 SEA ABB=ON  PLU=ON  FRIGERIO L?/AU
L8             5 SEA ABB=ON  PLU=ON  HADLINGTON J?/AU
L9             5 SEA ABB=ON  PLU=ON  HADLINGTON J?/AU
L10            2 SEA ABB=ON  PLU=ON  HADLINGTON J?/AU
L11            8 SEA ABB=ON  PLU=ON  HADLINGTON J?/AU
     TOTAL FOR ALL FILES
L12           20 SEA ABB=ON  PLU=ON  HADLINGTON J?/AU
L13            0 SEA ABB=ON  PLU=ON  (L1 OR L2) AND (L3 OR L8 )
L14            0 SEA ABB=ON  PLU=ON  (L1 OR L2) AND (L4 OR L9 )
L15            0 SEA ABB=ON  PLU=ON  (L1 OR L2) AND (L5 OR L10)
L16            1 SEA ABB=ON  PLU=ON  (L1 OR L2) AND (L6 OR L11)
     TOTAL FOR ALL FILES
L17            1 SEA ABB=ON  PLU=ON  (L1 OR L2) AND (L7 OR L12)
               D IBIB ABS HITSEQ
L18            2 SEA ABB=ON  PLU=ON  L3 AND L8
L19            2 SEA ABB=ON  PLU=ON  L4 AND L9
L20            2 SEA ABB=ON  PLU=ON  L5 AND L10
L21            3 SEA ABB=ON  PLU=ON  L6 AND L11
     TOTAL FOR ALL FILES
L22            9 SEA ABB=ON  PLU=ON  L7 AND L12
L23            2 SEA ABB=ON  PLU=ON  L18 NOT L16
L24            2 SEA ABB=ON  PLU=ON  L19 NOT L16
L25            2 SEA ABB=ON  PLU=ON  L20 NOT L16
L26            2 SEA ABB=ON  PLU=ON  L21 NOT L16
     TOTAL FOR ALL FILES
L27            8 SEA ABB=ON  PLU=ON  L22 NOT L16
L28            2 DUP REM L27 (6 DUPLICATES REMOVED)
               D 1-2 IBIB ABS

=> log y


STN INTERNATIONAL LOGOFF AT 17:04:08 ON 30 MAY 2007
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